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2157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,248	HIRAI ET AL.	
	Examiner	Art Unit	
	Clayton R. Williams	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/21/08;7/30/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 2 and 5-14 are pending in this application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 5, 6,10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 1, 13: ”an accepting unit for accepting…a request for communication from a communication device….”: claim unclear regarding what device submits the communication request.

b. Claim 1, 13: First extraction unit extracts candidates “based” on attribute information. Unclear if "based" comprises extracting candidates in whole or in part "based" on the attribute information; furthermore “based” does not adequately disclose particularly how attribute information is utilized by system in making such evaluations.

c. Claims 1, 13: “said accepting unit accepts designation of one of the functions….” Unclear what entity/source makes designation.

d. Claims 5, 6, 11, 12: “optimal combination”. Unclear what constitutes “optimal”

e. Claim 5: “said first attribute notifying unit will provide….” Unclear at what point in future notifying unit "will provide" determination to said first determining unit.

f. Claim 6, `12: “evaluating”. Unclear what constitutes evaluation of candidates.

g. Claim 6, 12: "based on sums of ...evaluation results". Unclear how determination of chosen candidates made, i.e. how sum of respective evaluations utilized.

h. Claim 7, 14: first limitation, unclear if either communication address, the function or both differ between devices b2 and a1.

i. Claim 7: third limitation, unclear what "attribute information" is received by said request receiving unit.

j. Claim 10: fourth limitation, ambiguity regarding what "communication device" a second extraction unit extracts at least one candidate for.

k. Claim 10: fourth limitation, unclear how "extraction unit" "bases" its extraction on received attribute information.

l. Claims 13-14: Although method is disclosed as executing on CCD, claims are indefinite as to where, for example, the first attribute information obtaining step stores information that it obtains from a2 (is it on the CCD, the devices b1 or b2, or some other entity?). Likewise, remaining limitations suffer from similar deficiencies.

4. Claims 8 and 9 lack insufficient antecedent basis for these limitations in the claims:

a. Claim 8: "the third communication device b2" and "said request receiving unit with the second communication function".

b. Claim 9: "the third communication device b2"

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 5, 7-11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekimoto, US 2005/0114646 (hereinafter Rekimoto), in view of Kawamura et al., US 2005/0050026 (hereinafter Kawamura).

For claims 1 and 13, Rekimoto discloses a communication control device for communicating with a communication device b1 with a first communication function and communicating with a communication device a2 with a second communication function (Abstract), comprising:

a first attribute information storage unit storing attribute information regarding a third communication function of the communication device a2; and storing attribute information regarding a communication function other than the first communication function and the second communication function for the communication devices ([0071], lines 5-6, disclosure of storage section 60 of the telephone for storing various information; [0098], lines 1-3, disclosure of telephone A receiving IP address of device A);

an accepting unit accepting a request for communication from a communication device having a communication function other than the first communication function and the second communication function ([0097], lines 1-3, disclosure of user A requesting a third communication function by pressing “a sharing button");

an attribute information transmission unit transmitting attribute information regarding the communication device a2 stored in said first attribute information storage unit to the communication device b1 with the first communication function based on the request accepted by said accepting unit ([0099], lines 1-3, disclosure of telephone A transmitting IP address of device A to telephone B);

Rekimoto fails to explicitly disclose the following limitations:

i. an attribute information receiving unit receiving attribute information that includes at least a communication address for a communication device b2 having the third communication function from the communication device b1 after the attribute information is transmitted by said attribute information transmission unit;

ii. a first attribute notifying unit for notifying the communication device a2 with the second communication function of the communication address obtained by said attribute information receiving unit; and

iii. a first extraction unit for extracting at least one communication device including, the communication device a2, stored in the first attribute information storage unit as candidates based on the attribute information,

iv. wherein said attribute information transmission unit transmits attribute information regarding the candidates extracted by the first extraction unit to the communication device b1 with the first communication function (Kawamura, [0084], lines 8-11, disclosure that transceiver unit 4 transmits list to appliance that requested device functionality);

v. the attribute information stored in the first attribute information storage unit includes function information regarding the functions of the communication devices;

vi. said accepting unit accepts designation of one of the functions stored in said first attribute information storage unit,; and

vii. said first extraction unit extracts the communication devices having a function accepted by the accepting unit as the candidates.

However, Kawamura discloses a home server, i.e. telephone of Rekimoto reference, that stores service function files of devices on network ([0043], lines 5-12), reading on i. Furthermore, an appliance/user requesting a service function from another device on network receives from the home server a service description file and address of the device with desired functionality ([0105], lines 5-9), reading on ii. Within the home server, a functional retrieval unit 13 extracts device candidates from storing unit 2 based on a service request received by a user (Kawamura, [0073], lines 1-6), reading on iii. After the candidate list is generated, transceiver unit 4 transmits list to appliance that requested device functionality (Kawamura, [0084], lines 8-11), reading on iv.

Among the attribute information stored by the home server is information regarding device functionality (Kawamura, [0045], lines 3-7), reading on v. In compiling a list of candidates, the home server seeks functionality that is desired by requesting user (Kawamura, [0060]), reading on vi. And finally, the list of generated candidates with desired functionality is provided to the requesting user, reading on vi. Rekimoto and Kawamura are analogous art because both are from the field of sharing device functionality over a network (Kawamura, [0073]), reading on vii.

It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Rekimoto with the teachings of Kawamura, because this modification would expand the functionality of the telephone apparatus taught by Rekimoto to include a plurality of attached user devices, as well a method for optimal combination of these attached devices for purposes ensuring compatibility between selected devices and a desired service..

For claim 2, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 1, further comprising a first attribute information obtaining unit for obtaining attribute information regarding a communication function other than the first communication function and the second communication function from at least one communication device with the second communication function (Kawamura, [0043], lines 5-12, service function files of devices contain information regarding functions of described device), wherein:

the first attribute information storage unit stores the attribute information obtained by the first attribute information obtaining unit (Rekimoto, [0071], lines 5-6, disclosure of storage section 60 of the telephone for storing various information).

For claim 5, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 1, wherein said attribute information receiving unit receives attribute information for at least one communication device having a communication function other than the first communication function and the second communication function, including the communication device b2, from the communication device b1, (Kawamura, [0043], lines 5-12, disclosure of home server storing service function files of devices on network) the communication control device further comprising:

a first determining unit determining an optimal combination of the communication devices based on the attribute information of candidates extracted by said first extraction unit and the attribute information received by said attribute information receiving unit (Kawamura, [0073], lines 6-9, disclosure of function retrieval unit compiling list of suitable candidates exhibiting functionality as requested by user/appliance), wherein

said first attribute notifying unit will provide a communication address in accordance with determination by said first determining unit (Kawamura, [0084], lines 1-5, disclosure of home server providing to designated devices the address and functionality of the of the candidates determined by retrieval unit).

For claim 7, Rekimoto discloses a communication control device for communicating with a communication device a1 with a first communication function (Abstract), comprising:

a second attribute information storage unit storing attribute information that includes at least a communication address for a third communication function of a communication device b2 different from the communication device a1 ([0071], lines 5-6, disclosure of storage section 60 of the telephone for storing various information; [0098], lines 1-3, disclosure of telephone receiving IP address of its attached device);

a request receiving unit receiving attribute information regarding a communication device a2 having the third communication function from the communication device a1 ([0099], disclosure of telephone A transmitting IP address of device A to telephone B); and

Rekimoto fails to explicitly disclose the following limitations:

i. a response transmission unit transmitting attribute information that includes at least a communication address of the communication device b2 which is stored in said second attribute information storage unit to the communication device a1 with the first communication function, in response to reception of attribute information by said request receiving unit,

ii. wherein the attribute information stored in said second attribute information storage unit includes function information regarding functions of the communication devices.

However, Kawamura discloses a system wherein an appliance/user requesting a service function from another device on network receives from the home server a service description file and address of the device with desired functionality ([0105], lines 5-9), reading on i..Moreover, the attribute information delivered to the requesting device includes function information regarding devices registered to the home server. Rekimoto and Kawamura are analogous art because both are from the field of sharing device functionality over a network ([0045], lines 3-7).

It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Rekimoto with the teachings of Kawamura, because this modification would expand the functionality of the telephone apparatus taught by Rekimoto to include a plurality of attached user devices, as well optimal combination of these attached devices.

For claim 8, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 7, wherein the communication control device is connected to the third communication device b2 with the second communication function, and the communication control device (Rekimoto, [0053], lines 1-7, disclosure of device B connected to telephone B) further comprises:

a second attribute notifying unit notifying the communication device b2 of a communication address of the communication device a2 which is received by said request receiving unit with the second communication function (Kawamura, [0105], lines

5-9, An appliance/user requesting a service function from another device on network receives from the home server a service description file and address of the device with desired functionality).

For claim 9, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 7, wherein the communication control device is connected to the third communication device b21 with the second communication function, the communication control device further comprising:

an attribute information obtaining unit obtaining attribute information on a communication function other than the first communication function and the second communication function from at least one communication device with the second communication function (Kawamura, [0043], lines 5-12, service function files of devices contain information regarding functions of described device), wherein

said second attribute information storage unit stores attribute information obtained by said attribute information obtaining unit (Rekimoto, [0071], lines 5-6, disclosure of storage section 60 of the telephone for storing various information; Rekimoto, [0098], lines 1-3, disclosure of telephone A receiving IP address of device A, which by analogy telephone B receives IP address of device B).

For claim 10, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 7, wherein:

the second attribute information storage unit stores attribute information on a communication function other than the first communication function and the second communication function for each of a plurality of communication devices (Kawamura, [0045], lines 3-7, disclosure that home server stores function information for a plurality of devices); and

said request receiving unit receives attribute information regarding communication function other than the first communication function and the second communication function for at least one communication device, including the communication device a2 (Rekimoto, [0099], lines 1-3, disclosure of telephone A transmitting IP address of device A to telephone B); and

the communication control device further comprising:

a second extraction unit extracting at least one candidate for a communication device which has a communication function other than the first communication function and the second communication function, including the communication device b2, based on attribute information of the communication device received by siad request receiving unit (Kawamura, [0073], lines 1-6, disclosure of functional retrieval unit 13 extracting device candidates from storing unit 2 based on a service request received by a user), wherein

said response transmission unit transmits attribute information of candidates extracted by said second extraction unit to the communication device a1 with the first communication function (Kawamura, [0105], lines 5-9).

For claim 11, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 10, further comprising a second determining unit determining an optimal combination of the communication devices based on attribute information of candidates extracted by said second extraction unit and attribute information of the communication devices received by said request receiving unit (Kawamura, [0073], lines 6-9, disclosure of function retrieval unit compiling list of suitable candidates exhibiting functionality as requested by user/appliance).

For claim 12, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 11, wherein said second determining unit evaluates all combinations of the candidates extracted by said second extraction unit and the communication devices received by said request receiving unit, receives evaluation results evaluated by the communication device a1 from the communication device a1, and determines the optimal combination of communication devices based on sums of one of the evaluation results evaluated by the second determining unit and one of the evaluation results evaluated by the communication device a1(Kawamura, [0073], lines 6-9, disclosure of function retrieval unit compiling list of suitable candidates exhibiting functionality as requested by user/appliance).

For claim 14, Rekimoto discloses a communication control method executed by a communication control device for communicating with a communication device a1 with a first communication function (Abstract), comprising:

a second attribute information storing step that stores attribute information that includes at least a communication address for a third communication function of a communication device b2 different from the communication device a1 ([0071], lines 5-6, disclosure of storage section 60 of the telephone for storing various information; [0098], lines 1-3, disclosure of telephone receiving IP address of its attached device);

a request receiving step that receives attribute information regarding a communication device a2 having the third communication function from the communication device a1 ([0099], lines 1-3, disclosure of telephone A transmitting IP address of device A to telephone B); and

Rekimoto fails to explicitly disclose the following limitations:

i. a response transmission step that transmits attribute information that includes at least a communication address of the communication device b2 which is stored in the second attribute information storing step to the communication device a1 with the first communication function, in response to reception of attribute information in the request receiving step ([0105], lines 5-9, An appliance/user requesting a service function from another device on network receives from the home server a service description file and address of the device with desired functionality),

ii. wherein the attribute information stored in said second attribute information storage step includes function information regarding functions of the communication devices (Kawamura, [0045], lines 3-7, disclosure that home server stores function information for a plurality of devices).

However, Kawamura discloses a system wherein an appliance/user requesting a service function from another device on network receives from the home server a service description file and address of the device with desired functionality ([0105], lines 5-9), reading on i..Moreover, the attribute information delivered to the requesting device includes function information regarding devices registered to the home server. Rekimoto and Kawamura are analogous art because both are from the field of sharing device functionality over a network ([0045], lines 3-7).

It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Rekimoto with the teachings of Kawamura, because this modification would expand the functionality of the telephone apparatus taught by Rekimoto to include a plurality of attached user devices, as well optimal combination of these attached devices.

Rekimoto and Kawamura are analogous art because both are from the field of sharing device functionality over a network.

It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of Rekimoto with the teachings of Kawamura, because this modification would expand the functionality of the telephone apparatus taught by Rekimoto to include a plurality of attached user devices, as well optimal combination of these attached devices.

7. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekimoto, in view of Kawamura, and further in view of Chalon, US 7,213,070 (hereinafter Chalon).

For claim 6, the combination of Rekimoto and Kawamura discloses a communication control device according to claim 5, wherein said first determining unit evaluates all combinations of the candidates extracted by said first extraction unit and the communication devices received by said attribute information receiving unit, receives evaluation results evaluated by the communication device b1 from the communication device b1, and determines the optimal combination of communication devices based on sums of one of the evaluation results evaluated by said first determining unit and one of the evaluation results evaluated by the communication device b1 (Kawamura, [0073], lines 6-9, disclosure of function retrieval unit compiling list of suitable candidates exhibiting functionality as requested by user/appliance).

The combination of Rekimoto and Kawamura fails to explicitly disclose that the communication control device evaluates a combination of the candidates that includes plural devices received by the attributed information receiving unit.

However, Chalon discloses a method of network device brokering that includes brokers that compile lists of complementary services (col. 5, lines 3-5 and 50-58). Moreover, the system allows for both “backward” and “forward” complementary relationships to be tracked (col. 6, lines 64-67). Rekimoto, Kawamura and Chalon are

analogous art because all are from the field of sharing device functionality over a network.

It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of the combination of Rekimoto and Kawamura with the teachings of Chalon because this modification would expand the functionality of the telephone apparatus taught by Rekimoto to include a plurality of attached user devices to the device initiating the service discovery request, as well optimal combination of the discovered devices and devices attached to the initiating device.

For claim 12, the combination of Rekimoto and Kawamura discloses the combination of Rekimoto and Kawamura discloses a communication control device according to claim 11, wherein said second determining unit evaluates all combinations of the candidates extracted by said second extraction unit and the communication devices received by said request receiving unit, receives evaluation results evaluated by the communication device a1 from the communication device a1, and determines the optimal combination of communication devices based on sums of one of the evaluation results evaluated by the second determining unit and one of the evaluation results evaluated by the communication device a1(Kawamura, [0073], lines 6-9, disclosure of function retrieval unit compiling list of suitable candidates exhibiting functionality as requested by user/appliance).

The combination of Rekimoto and Kawamura fails to explicitly disclose that the communication control device evaluates a combination of the candidates that includes plural devices received by the attributed information receiving unit.

However, Chalon discloses a method of network device brokering that includes brokers that compile lists of complementary services (col. 5, lines 3-5 and 50-58). Moreover, the system allows for both “backward” and “forward” complementary relationships to be tracked (col. 6, lines 64-67). Rekimoto, Kawamura and Chalon are analogous art because all are from the field of sharing device functionality over a network.

It would have been obvious to one skilled in the art at the time of the invention to modify the teachings of the combination of Rekimoto and Kawamura with the teachings of Chalon because this modification would expand the functionality of the telephone apparatus taught by Rekimoto to include a plurality of attached user devices to the device initiating the service discovery request, as well optimal combination of the discovered devices and devices attached to the initiating device.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive. Argument: Prior art does not teach attribute information stored in an attribute information storage unit that includes function information of the communication devices.

Response: Kawamura ([0045], lines 3-7), clearly discloses a home server that stores function information for a plurality of devices. The obviousness rejection of record analogizes the home server of Kawamura to the IP telephones taught in Rekimoto. As such, the theoretical system envisioned does store attribute and function information for a plurality of devices.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clayton R. Williams whose telephone number is 571-270-3801. The examiner can normally be reached on M-F (8 a.m. - 5 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Clayton R. Williams
Patent Examiner
Art Unit 2157

Sept. 12, 2008
CRW

/Ario Etienne/

Supervisory Patent Examiner, Art Unit 2157